Listing and Amendments to the Claims

This listing of claims will replace the claims that were published in the PCT Application:

1.   (currently amended) Arrangement for adaptive bit recovery including an adaptive equalizer (13) and an adaptive partial response maximum likelihood detector (14), characterized in that , wherein the arrangement further includes an overflow control block (86) for the adaptive equalizer (13) for monitoring one or more of the adaptation coefficients.

2.   (currently amended) Arrangement according to claim 1, further including a scaling block (89) for applying a scaling to one or more of the data paths of the coefficient values when the overflow control block (86) indicates that one or more of the coefficients run out of their intended data range.

3.   (currently amended) Arrangement according to claims 1 or 2, further including means (87) for obtaining phase information by comparing the highest absolute coefficient value with its coefficient number.

4.   (currently amended) Arrangement according to one of claims 1 to 3 claim 1, further including a control logic (74) for an adaptation constant for a tap value update for the coefficients.

5.   (currently amended) Arrangement according to claim 4, further including a gradient analyzing block (76) for analyzing a gradient of the coefficient transitions for monitoring the speed of adaptation.

6.   (currently amended) Arrangement according to claim 5, further including a set level block ~~(77)~~ for performing an adaptation coefficient scaling in dependence on the value of the detected gradient.

7.   (currently amended) Arrangement for adaptive bit recovery including an adaptive equalizer ~~(13)~~ and an adaptive partial response maximum likelihood detector ~~(14), characterized in that~~ , wherein the arrangement further includes a state violation checker ~~(162)~~ for monitoring the allowed states and indicating state violations, and a noise detector ~~(155)~~ for detecting larger deviations of the target values.

8.   (currently amended) Arrangement according to claim 7, further including a controllable scaling block ~~(163)~~ for scaling the target value update to reduce the impact of input sample changes.

9.   (currently amended) Arrangement according to claim 7 ~~or 8~~, further including a path memory and survivor control block ~~(153)~~ for storing path decisions for each state and the most likely state.

10.   (currently amended) Arrangement according to claim 9, further including an output checker ~~(175)~~ for finding invalid bit transitions.

11.   (currently amended) Arrangement according to ~~one of claims 1 to 10~~ claim 1, wherein generated error information is provided to further processing units ~~(9)~~ for supporting data processing.

12.   (currently amended) Apparatus for reading from and/or writing to recording media, ~~characterized in that~~ wherein it includes an arrangement according to ~~one of claims 1-11~~ claim 1 for adaptive bit recovery.